



54 Times Network Throughput Performance Gains Through Improved File Transfer Tool and End System Host/Network Adjustments

Team members from the NASA Research and Engineering Network (NREN) at Ames and the Science and Engineering Network (SEN) at Goddard worked together to help network users from Goddard's 3-D Cloud-Resolving Model project increase data transfer performance through improved file transfer tools and end system host adjustments.

The 3-D Cloud-Resolving Model team had been utilizing the standard file transfer application called Secure Copy (SCP), resulting in maximum sustainable data transfer rates of 5.7 Mbps, between Goddard and Ames. By utilizing the improved multi-stream file transfer application, BBFTP, these data transfer rates were improved to a maximum sustainable data transfer rate of 169 Mbps. Furthermore, by moving the user host to the Science and Engineering Network at Goddard allowed for the application of Jumbo Frames. This improvement resulted in an improved maximum sustainable data transfer rate of 308 Mbps, where the disk I/O speed of the user's local desktop machine is now suspected to be the limiting factor.

